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For: Method of Measuring Discrete, Incremental Feedback from Motion Devices

CLAIMS

1 1. A method of measuring discrete incremental feedback from motion systems that
2 create feedback pulses, the method comprising:

3 establishing a minimum feedback pulse sampling period;
4 accumulating feedback pulses during a sampling period;
5 upon the first feedback pulse after the minimum feedback pulse sampling period,
6 ending the current sampling period and beginning the next sampling period; and
7 determining the quantity of feedback pulses accumulated during the current
8 sampling period.

1 2. The method of measuring discrete, incremental feedback from motion systems of
2 claim 1 wherein the minimum feedback pulse sampling period is comprised of one or more
3 periods of a clock signal.

1 3. The method of measuring discrete, incremental feedback from motion systems of
2 claim 2 wherein the period of the clock signal is less than the shortest period between feedback
3 pulses.

1 4. The method of measuring discrete, incremental feedback from motion systems of
2 claim 3 wherein the period of the clock signal is less than or equal to one-tenth the shortest
3 period between feedback pulses.

1 5. The method of measuring discrete, incremental feedback from motion systems of
2 claim 2 wherein the minimum feedback pulse sampling period is a multiple of the clock signal
3 period.

1 6. The method of measuring discrete, incremental feedback from motion systems of
2 claim 2 wherein sampling periods can begin and end only concurrently with a clock signal.

1 7. The method of measuring discrete, incremental feedback from motion systems of
2 claim 6 further comprising calculating estimated motion velocity by dividing the number of
3 feedback pulses accumulated during a sampling period by the time period of such sampling
4 period.

1 8. The method of measuring discrete, incremental feedback from motion systems of
2 claim 7 wherein the time period of such sampling period is determined by counting the number
3 of clock signals occurring during the sampling period.

1 9. A method of measuring discrete, incremental feedback from motion systems that
2 create feedback pulses, the method comprising:

3 providing for a variable feedback pulse sampling period; and

4 accumulating feedback pulses during each sampling period.